



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,041	07/15/2003	Timothy M. Swager	M0925.70137US00	8897

7590 03/10/2005

Timothy J. Oyer, Ph.D.  
Wolf, Greenfield & Sacks, P.C  
600 Atlantic Avenue  
Boston, MA 02210

EXAMINER

ZALUKAEVA, TATYANA

ART UNIT PAPER NUMBER

1713

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/621,041

Applicant(s)

SWAGER ET AL.

Examiner

Tatyana Zalukaeva

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-103 is/are pending in the application.
- 4a) Of the above claim(s) 8,21-24,27,40,42 and 51-102 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-20,25,26,28-39,41,43-50 and 103 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-103 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                 |                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/04; 11/04</u> | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group 1, claims 1-20, 25, 26, 28-50, 58-96 and 103, in the reply filed on December 16, 2004 is acknowledged.

The traversal is made on the grounds that it is believed that a single search and examination covering all claims would not place undue burden on the Examiner.

This is not found persuasive because the consideration of undue burden is one that must be made by the Examiner, Applicants' arguments that the search of one invention must necessarily result in a search of the other one has been considered, but is not persuasive insofar as the searches are not co-extensive and additional search would of necessity, be required for the combination of inventions. The requirement is still deemed proper, and is therefore **made final**. By the election of structure identified by Applicants the following claims appear to form a group commensurate with the elected species for search and examination purposes : 1-7, 9-20, 25, 26, 28-39, 41, 43-50, and 103.

Thus, claims 1-7, 9-20, 25, 26, 28-39, 41, 43-50, and 103 are examined on the merits.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1713

3. Claims 1-7, 9-20, 25, 26, 28-39, 41, 43-50, and 103 rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited in claim 1 "...and having electrical properties such that

electronic interactions extend at least 2 monomer units from their source such that a

spectral comparison of one of the monomer units to the polymer molecule

comprising such unit demonstrates a change in gap between the highest filled

molecular or electronic orbital and the lowest unfilled molecular or electronic orbital

of the monomer unit versus the polymer molecule of at least 0.1 eV..." ,

is indefinite because the metes and bounds of such are not readily ascertainable.

The recited specifically in claim 39 B and D are selected from the group consisting of a double bond and a triple bond is indefinite because the definition contradicts with the structure presented in the same claim, wherein B and d are positioned.

### ***Interpretation of Claims***

4. Claim 1 calls for aggregate composition comprising plurality of polymer molecules with molecular weight of at least 7000 g/mol, having specific fluorescent quantum yield, the aggregate is stable in the absence of solvent under specific conditions. All spectrum characteristics of the aggregate will be fulfilled once the aggregate of the prior art is substantially identical to the instantly claimed aggregate by its chemical nature and make-up.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

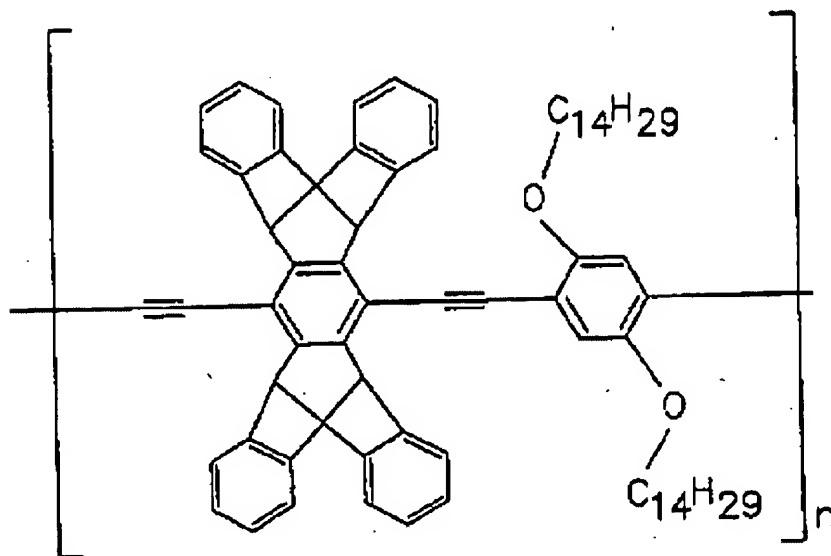
7. Claims 1-7, 9-20, 25, 26, 28-39, 41, 43-50, and 103 are rejected under 35 U.S.C. 102(e) as being anticipated by or in the alternative as obvious over Swager et al US 2003/0178607.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Art Unit: 1713

Swager discloses conductive polymer compositions (abstract), wherein on fig.6b(2), 12(b) and others the polymers defined by the instantly elected species are shown.

These species are defined also in the instant claims 39, 41, and found in Swager in the above discussed figures and [0019], [0021]. Fig. 19 shows polymers that can provide charge-transfer interactions.



**FIG. 6b(2)**

Since the species is clearly named, the species claim is anticipated, no matter how many other species are additionally named, Ex parte A, 17 USPQ 2d 1716 (Bd.

Art Unit: 1713

Pat.App.& Inter. 1990). The **named species** also anticipate the claims directed to genus, *In re Slayter*, 276 F.2d, 408, 411,125 USPQ 345,347 (CCPA 1960).

With regard to the properties that are not disclosed by Swager, the rejection is made in the sense of per *In re Fitzgerald* (205 USPQ 594). (CAFC), wherein the base presumption is that the properties governing the claimed aggregates, if not taught, may be very well met by the polymers of Swager, since the composition of Swager is essentially the same and made in essentially the same manner as applicants'.

Therefore, the properties instantly claimed would be inherently and necessarily present.

In the event that one of the ordinary skill in the art would not immediately envisage Applicants' instantly claimed composition, then the composition is rendered obvious from the disclosure found in the prior art. The prior art contains each of Applicants' instantly claimed ingredients and clearly suggests to one of ordinary skill in the art that they be used in combination as claimed. Such a suggestion renders obvious applicants' instantly claimed composition, and as such, the claims are not patentable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva  
Primary Examiner  
Art Unit 1713

A handwritten signature in black ink, appearing to read 'T. Zalukaeva', with a long, sweeping horizontal line extending to the right.

March 2, 2005